

Comparative study of the results of evaluation of protozoan and parasitic infections with direct, condensation and culture methods in stool specimens of patients referring to laboratories of hospitals affiliated to Ardabil University of Medical Sciences in 1397

Abstract

Background & Objective: Parasitic diseases are one of the health problems of all societies and are considered as barriers to progress socio-economic development, especially in most developing countries. This study compares the results of evaluation of protozoal and parasitic infections with direct, condensation and culture methods in stool specimens of patients referring to laboratories of hospitals affiliated to Ardabil University of Medical Sciences in 1397.

Methods: A total of 409 stool specimens were collected from laboratories in hospitals affiliated to the university were evaluated and after less than two hours, they were transferred to the parasitology laboratory of the Faculty of Medicine and Paramedical Sciences for re-evaluation. In the laboratory, samples were evaluated using direct, condensation and culture methods. Data were analyzed using SPSS version 21 software.

Results: In this study, 409 stool specimens were collected from Imam Khomeini (232) and Booali (177) hospitals. In total, 22 cases (5.4%) were infected with intestinal parasites. Infection in men was 5.3% and in women it was 5.4%. Protozoal infection was 3.7% and worm was 1.7%.

Of the 177 specimens studied in Booali Hospital, no positive cases were reported and the results were reported false negative, but in the re-examination of samples in the parasitology laboratory of the Faculty of Medicine, 7 cases were reported positive. The rate of infection in men was 1.9% and in women were 6.7%. The rate of protozoal infection was 7.1% and worm was 2.2%. In the study of samples with culture, no case was found.

Of the 232 samples tested in Imam Khomeini Hospital was reported to have 5.6% parasitic protozoan infections. In only two cases, the results of Imam Khomeini Hospital were same as the results of this review (study at the Faculty). In the re-evaluation of other positive cases reported in the hospital, there were no parasitic agents in the present study, which due to accurate diagnosis in the hospital can be linked to incorrect posting and delays in sending laboratory samples to the college, which led to destruction, and the death of the trophozoites. In the sample of Imam Khomeini hospital, parasitology laboratory of the medical school reported 6.5% parasitic infection. The rate of infection was 7.1% in men and 5.9% in women. The rate of infection with protozoan was 5.2% and worm was 1.3%. In the study of samples with culture, only one case of infection was observed.

Conclusion: Considering that in the hospital stool samples are examined only by direct method, only a small percentage of positive cases are detected and in order to increase the quality of the test, the stool test requires the use of all three methods of direct, condensation and culture.

Keywords: Frequency, Intestinal parasites, Hospital laboratory, Direct, Condensation, Culture, Ardabil